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Information Warfare's Missing Quarterback
The Case for a Joint Force Information Warfare Component Commander

by

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A paper submitted to the Faculty of the Naval War College in partial satisfaction of the requirements of the Department of Joint Military Operations.

The contents of this paper reflect my own personal views and are not necessarily endorsed by the Naval War College or the Department of the Navy.

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As a result of the Gulf War's robust application of IW, today's Commander in Chief (CINC) and joint force commander (JFC) can mistakenly think the current IW planning process promotes multiservice unity of effort. However, available methods to organize for the joint IW effort traditionally produce a powerless IW commander that plans and executes single dimension operations. To reap force multiplying effects that full spectrum IW can offer, the JFC must delegate sufficient coordinating authority and provide clear planning guidance to his IW commander. Unfortunately, current IW organization methods also fail to provide a reliable integrated planning process that allows seamless coordination across service boundaries.

Implementation of a Joint Force Information Warfare Component Commander (JFIWCC) provides the IW commander with the authority to resolve current planning problems and execute multifaceted IW operations. The JFIWCC can compose the IW 'story' and ensure its exacting performance--ultimately allowing the JFC to operate inside the adversary's decision cycle.

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Information Warfare's Missing Quarterback
The Case for a Joint Force Information Warfare Commander

"The real target in war is the mind of the enemy commander, not the bodies of his troops."

Captain Sir Basil Liddell Hart
Thoughts on War, 1944[1]

INTRODUCTION:

"At 0300 (Persian Gulf Time) on 17 January, the battle of the airwaves began."[2] Iraqi air defense systems were instantly paralyzed when their radars became the focus of meticulously coordinated Navy and Marine EA-6B Prowler, and Air Force EF-111 jamming. Mixed within this storm of electrons were U.S. High speed Anti Radiation Missiles (HARM) and British Air Launched Anti Radiation Missiles guiding on the emissions of key surface to air targeting radars.[3] Complementing this lethal suppression of enemy air defenses (SEAD) were laser guided missile attacks on key radar installations by Army and Marine helicopters. From within this protective cloud, wave after wave of coalition strike aircraft and Tomahawk cruise missiles, poured into Iraq, pounding command and control (C2) centers and key air defense installations.[4]

Operation Desert Storm's early domination of the electronic battlespace marked the birth of coordinated strategic and operational information warfare (IW). Remarkably, a recently formed and extremely diverse multinational force was able to achieve these synergistic results. Ironically, Desert Storm's decisive win in the "battle of the airwaves" has prevented subsequent joint operations from reaching their full potential with the IW edge, and hindered further IW organizational development. As a result of the Gulf War's robust application of

IW, today's commander in chief (CINC) and joint force commander (JFC) can mistakenly think the current IW planning process achieves multiservice unity of effort everytime.

Available methods to organize the joint IW effort traditionally produce a powerless IW process that plans and executes single dimension operations. To reap force multiplying effects that fully integrated IW can offer, the JFC must delegate sufficient coordinating authority and provide clear planning guidance to his IW officer. Unfortunately, current IW organizational frameworks typically fail to provide a reliable integrated planning process that encourages seamless coordination across service boundaries.

A promising alternative to the traditional methods to organize for IW is the creation of a new functional component commander, the Joint Force Information Warfare Component Commander (JFIWCC). The JFIWCC concept has proven successful during two high visibility joint exercises; Operation Purple Star (CJTFEX-96), and JTFEX 97-3. This paper supports establishment of the JFIWCC method to organize for IW. Its implementation resolves current IW contentions and provides the conduit by which the JFC can deliver multifaceted and synergistic IW operations.

DEFINITIONS:

Hindering information warfare doctrine and operational development are endless terminology introductions and definition transformations. The absence of a single source reference accepted as the joint standard across the services perpetuates the confusion in this modern warfare. A recent addition to the warfighter's lexicon is the term "Information Operations" (IO). Adding to the confusion is the indiscriminate use of the buzzword

information warfare and its frequent use as a direct substitute for yesterday's buzzword, command and control warfare (C2W).

Joint Publication (JP) 3-13, Information Operations, upon publication, will be the latest attempt to focus the information world's vision and provide a foundation for subsequent doctrine development. The recently published Department of Defense Directive (DODD) S-3600.1, Information Operations, provides the latest round of terminology discussion. This directive defines information operations as:

> "Actions taken to affect adversary information and information systems while defending one's own information and information systems."

While information warfare is:

> "IO conducted during time of crisis or conflict to achieve or promote specific objectives over a specific adversary or adversaries."[5]

Joint Pub 3-13.1, Joint doctrine for Command and Control Warfare, identifies C2W as an application of IW in military operations and further defines C2W as:

> "The integrated use of psychological operations (PSYOP), military deception, operations security (OPSEC), electronic warfare (EW), and physical destruction, mutually supported by intelligence, to deny information to, influence, degrade, or destroy adversary C2 capabilities while protecting friendly C2 capabilities against such actions."[6]

In summary, information operation is a broad brush philosophy that applies to all levels of war during periods of peace and conflict. However, conducting IO in times of conflict is also known as information warfare. Taking this one step further, applying IW against an enemy's C2 system is C2W. So when targeting an adversary's early warning net, during a crisis, is the information planner performing IO, IW or C2W? For the scope of this paper, the term IW will be used to when referring to the C2 attack or protection during hostilities.

THE IW ADVANTAGE:

"In wartime, truth is so precious that she should always be attended by a bodyguard of lies."

Sir Winston Churchill[7]

"Operation Desert Storm was a textbook application of the [IW] strategy."[8] Operational security ensured the undetected westward movement of the coalition ground forces and supported the deceptive Marine amphibious landing that held the Iraqi coastal defense units in place. Physical destruction complimented the electronic warfare jamming assault against Iraqi C2 and air defense networks. Additionally, PSYOP leaflets were distributed urging Iraqi ground forces to surrender.[9]

Synchronized IW not only disrupts and destroys enemy C2 functions, it also, when fully employed, protects the C2 of the joint forces. With a more efficient C2 process the JFC is able to operate 'inside' an adversary's decision cycle by processing information through the command and control decision cycle faster than an adversary commander.[10] Operating inside the opponent's decision cycle prevents the enemy from obtaining the initiative and forces him to resort to a reactive mode of operation.[11]

The synergistic effects of IW assists the JFC to seize the initiative and deliver a decisive blow against an adversary.[12] With the initiative, the JFC retains the offensive and can exploit the principles of war. A credible deception plan, successfully executed, will increase likelihood of achieving the element of surprise. Operational security protects the JFC's intentions from the enemy and the principle of security in the protection of the JFC's decision cycle from enemy attack.[13]

The critical component to producing robust information warfare is profound intelligence support. "Every aspect of IW relies on accurate, timely, and directed intelligence."[14] For example; "Intelligence assessments of vulnerabilities of command and control targets allow planners to identify and select the appropriate tools for [IW] operations. Intelligence monitoring activities, prior to and during a military operation, provide planners with the necessary information to tailor operations and to gauge effectiveness of the overall [operation]."[15]

IW CHALLENGES:

The strategic and operational applications of information warfare allow the JFC to shape the battlefield to the advantage of the joint forces.[16] Operation Desert Storm proved the viability of this emerging warfare, but unfortunately IW is rarely employed effectively. This is largely due to three major challenges: a lack of CINC or JFC direction, insufficient methods available to organize for IW, and minimal interservice cooperation.

JFC DIRECTION. IW integration into operational plans requires early identification of strategic and operational IW objectives by the CINC and JFC during the deliberate and crisis action planning processes. Without this JFC guidance, in the form of an IW objective, attempts to incorporate IW into completed operational plans may result in a disjointed IW effort. Particularly important are the early integration of PSYOP and deception into the plan when these elements are critical to achieving the JFC's desired end state. An incoherent application of IW often fails to produce the desired end state. As an example; during joint exercise Ahuas Tara 95, the lack of PSYOP participation during the joint targeting process

resulted in the physical destruction of a C2 node that was critical to the PSYOP effort.[17] Contrarily, a coherent application permits the shaping of the battlespace to the JFC's advantage. For instance; the desire to exploit enemy communications to work inside his decision cycle, may require the destruction of a key land line C2 nodes, forcing the adversary's use of exploitable radio communications. Without deliberate integration during the planning process, IW success may be limited to only sporadic victories at the tactical level.

IW ORGANIZATION. Current doctrine recognizes the importance of integrated IW but falls short of providing a functional IW process. "The current arrangement of the Joint Staff presents some unique challenges as no one is actually in charge."[18] JP 3-13.1 states: "The JFC should provide guidance and establish procedures within the joint force for planning, coordinating and executing [IW]."[19] Additionally, "the JFC is authorized to organize the staff as deemed necessary to ensure [IW] efforts are fully coordinated."[20] Usually the JFC delegates IW responsibility to a member of the joint staff, normally the J-3.[21] JP 3-13.1 provides further guidance: "To assist the J-3 in exercising joint [IW] responsibilities, the JFC will normally designate [an IW] officer. The primary function of [an IW] officer should be to serve as a ... *"facilitator" for coordinating* the integration of [IW] elements between the various parts of the JFC's staff, higher echelon staffs, component staffs, and multinational staffs."[22]

This "coordinating authority" limitation severely restricts the IW officer's ability to function effectively. The successful integration of IW into the JFC's operational plan requires an IW officer with sufficient vested authority to prevent the stove pipe application of

the elements of IW by the individual services. JP 1-02, DOD dictionary, defines coordinating authority as:

> A commander or individual assigned responsibility for coordinating specific functions or activities involving forces of two or more Military Departments or two or more forces of the same Service.
>
> The commander or individual has the authority to require consultation between the agencies involved, but *does not have the authority to compel agreement.* Coordinating authority is *more applicable to planning and similar activities than to operations.*[23]

A coordinating authority may be ineffective during the IW planning process, as interservice coordination hinges upon voluntary cooperation of the individual service components. A broader authority is required to direct, vice request, asset and resource coordination across service boundaries. Additionally, the IW planner requires more than coordination authority for selection of IW targets during the joint targeting process. Without sufficient authority, the IW planner is often powerless to meet IW objectives higher than the tactical level.

Two options to organize for IW are cited by JP 3-13.1: IW planning during existing daily planning meetings, and formation of an IW cell of select representatives.[24] The first method involves macro-level planning among joint staff members and can, at best, produce minimal IW synchronization. For it to be productive, all planning representatives involved must be IW savvy and extremely supportive. Additionally, a majority of the planning effort rests upon the J-3 operations officer who is usually unable to dedicate the requisite planning time to prevent a disjointed effort.

Presently, the IW cell concept is generally the preferred method of organization.[25] The IW cell is formed of select representatives from each of the staff elements, functional and

service components, and supporting agency augmentees. "The cell would be a coordinating body and rely on the staff elements and/or components that are represented in the [IW] cell to carry out the detailed support necessary to plan and execute [IW]."[26] This method is more productive than the previous one as it encompasses a broader representation of IW planners, both on and off the staff, and is led by a dedicated IW officer. The IW cell concept functions adequately only when led by a senior grade IW officer able to effectively direct coordination among the cell representatives.

Unfortunately, in practice these methods remain ineffective primarily due to: the limiting scope of a coordinating authority, lack of a dedicated IW staff, and inability to effectively monitor the execution phase of an operation. Operational IW is an enormous planning and execution task. To be successful, a fairly large staff is required not only to coordinate a plethora of planning issues but also to monitor the execution phase. Additionally, adverse personal interactions between members of the joint staff could play a counter productive role during IW coordination planning, resulting in the asymmetrical application of IW.

INTERSERVICE COOPERATION. Synchronizing the chapters of the IW story is crucial to producing force multiplying synergistic effects. Homogenous application of the elements of IW requires multiservice coordination of available assets. Unfortunately, a decade of decreasing military budgets has produced a smaller force with fewer platforms. This leaner force survives on interservice support and is reliant upon multi-mission capable platforms to meet increasing mission requirements.

Since Operation Desert Storm, the IW planner has seen the retirement of the Air Force's F-4G Wild Weasel and EF-111 Raven. While the Air Force's F-16 HARM Targeting System

(HTS) has assumed the Wild Weasel's SEAD role; the only platform capable of providing full spectrum electronic jamming is the EA-6B Prowler. No longer can the Air Force be self sufficient in the enemy's electronic battlespace; offensive operations requiring SEAD jamming must come from the Navy or Marine Corps. This interservice dependency fosters a cooperative team effort while breaking down parochial service barriers.

Unfortunately, this team effort continues to be eroded by the misconception that multi-mission diversity can offset asset reductions. The "quality over quantity" philosophy inadvertently inhibits IW coordination. Operation Desert Storm planners easily performed multiservice SEAD missions and through a combined service effort launched 1000 HARM.[27] Many of these HARM missions, however, were conducted from recently retired platforms like the A-6E, A-7E, and F-4G. Today, fewer assets are available to meet increasing mission requirements, as a result, service component commanders are less likely to lend assets. The IW planner has to be extremely convincing when requesting multi-mission capable platforms that may be critical to the success of other service component commanders. Unfortunately, the current IW organizational frameworks operation a requested vice directed use of limited assets and must compete with far senior planners when building a mission. Full spectrum IW requires seamless multiservice support. No longer can operational IW rely upon tactical redundancy to overcome service parochialism.

OPERATION DESERT STORM - AN ANOMALY:

Warfighters have a tendency to prepare for future conflicts by re-fighting the last war. A replay of Operation Desert Storm may not produce the same outcome on today's battlefield.

It is important to note that before the Persian Gulf war began, the deck was stacked in IW's favor. Operation Desert Storm's atypical IW success can be attributed to three major factors: strategic level IW objectives defined from the onset, sufficient planning time, and a sufficient pool of IW assets.

IW GUIDANCE. Based on Secretary of Defense guidance for Operation Desert Storm, the Commander in Chief, Central Command (CINCENT) promulgated six theater military objectives including "attack Iraqi political-military leadership and command and control."[28] This strategic level objective was further translated into operational and tactical objectives. Early IW objectives led to uncommon IW planning support by the JTF staff and component commanders. For example, immediately following the identification of the theater objectives, an inter-agency IW cell was established to fill critical intelligence gaps to support the attack of Iraqi C2. Throughout Operation Desert Storm, this high powered IW cell enjoyed an unprecedented 99% C2 target selection rate by the joint targeting board. This approval rate was critical to the timely re-strikes of newly identified C2 functioning nodes. From the beginning of the operation, IW planners were delegated sufficient authority and given crystal clear guidance to plan and execute strategic and operational IW.

TIME. Soon after Iraq's advance into Kuwait, the Secretary of Defense instructed CINCENT to develop an offensive plan against Iraq[29]. Additionally, multiagency planning cells were created at the strategic level to fill critical intelligence gaps. These interagency cells had the time to produce crucial intelligence support for the efficient degradation of the Iraqi C2 network. Sufficient planning time was available to build a synergistic IW operation based on recently acquired intelligence for execution by joint and coalition forces.

IW ASSETS. Full spectrum IW requires the combined efforts of available IW assets — surface, subsurface, airborne, and space based. The Gulf War IW planners enjoyed an unprecedented magnitude of assets for the application of IW. Sufficient assets were in theater to support all component commanders. As a result, service competition over asset employment was minimal. A review of the tactical air assets alone, for the first month of Operation Desert Storm, reveals the coalition's tremendous air power. In January 1991, there were almost 1300 U.S. military tactical aircraft, and over 270 coalition aircraft, available to the CINCENT planners.[30]

A SMARTER OPPONENT:

When considering future conflicts, the warfighter must recognize tomorrow's battlefield will be considerably different. The lessons learned from Operation Desert Storm has, no doubt, produce a much smarter opponent. Nations interested in protecting their own command and control systems will develop a new generation of information warfare counter tactics. The Persian Gulf War emphasizes, to all commanders concerned with protecting their decision cycle, the importance of; a decentralized style of execution, redundant C2 systems, and hardened C2 nodes.

A review of *Military Thought* reveals the Russians have adopted the philosophy that "intelligence and EW are potentially an independent component of the operation or battle: an independent form of combat operations."[31] "The idea is to blind the opponent before the onset of action by a massive use of EW against his reconnaissance, warning, and command and control systems."[32] Additionally, the Russians recognize the coalition enjoyed

uninterrupted command and control of troops and weapons because the Iraqis lacked "radioelectronic" countermeasures against these systems.[33] Not surprisingly, the success of precision guided munitions (PGM) in the Gulf War has prompted the evolution of Russian PGM counter tactics.[34]

The Bosnian shoot down of an F-16 by an SA-6 may be attributed to lessons from the Gulf war. The Bosnians employed an ambush tactic, possibly with a modified SA-6, that permitted passive tracking of a target.[35] It is possible the Bosnians also observed the lethality of HARM and took appropriate measures to counter it.

THE JFIWCC SOLUTION:

Operation Desert Storm achieved unity of effort in the application of IW despite existing organizational shortfalls. CINCENT conquered the inadequate IW process by issuing crystal clear theater objectives that focused the IW effort towards the Iraqi leadership and C2 structure. Unfortunately, efforts to duplicate this success in subsequent joint operations and training exercises have failed. Without IW flavored theater strategic objectives or operational guidance, today's IW organizational framework does not provide the structure necessary to plan and execute synergistic IW.

It is in the vested interest of the JFC to organize the joint staff in a way that promotes a positive atmosphere for the development and execution of information warfare. "A JFC has the authority to organize forces to best accomplish the assigned mission based on the concepts of operations. The JFC can establish functional component commanders to conduct operations."[36] This decision rightfully belongs to the JFC and will be situational dependent.

An emerging option to organize for IW is the creation of the Joint Force Information Warfare Component Commander (JFIWCC). The primary responsibility of this new functional component commander would be to develop and execute integrated IW operations, and promote unity of effort. Additionally, the JFIWCC will provide IW support to the other component commands.

The JFIWCC concept originated as a result of the difficulties encountered when joint task force commanders establish a Joint Psychological Operation Task Force (JPOTF) independent of the IW framework. Organization of a JPOTF vests virtually unlimited authority to the conduct of PSYOP, as is required. Unfortunately this results in the independent application of PSYOP and an overall asymmetrical application of the total IW effort. To alleviate this, the elements of the JPOTF were placed under the cognizance of a component commander concerned with *all IW issues*, namely the JFIWCC.

The JFIWCC organization at the operational level is similar to the Navy's tactical application of IW. The Navy's composite warfare commander structure provides for IW unity of effort via the Command and Control Warfare Commander (C2WC). This method is successful as it provides the C2WC with sufficient authority and staff support to execute IW operations in a coordinated fashion.

The first evaluation of the JFIWCC organization was by the Commander, Second Fleet (COMSECONDFLT) during Operation Purple Star (CJTFEX 96-2). SECONDFLT's IW staff officer commented; "the exercise achieved full IW integration and synergistic results on execution via the brokerage of all plans through a single commander."[37] Advantages to this arrangement included: "direct access by component commanders for IW support, a single

point of access to the IW experts, and participation by the JFIWCC, as a coequal, in the joint targeting process."[38]

Another successful JFIWCC operation to date was JTFEX 97-3, again executed by COMSECONDFLT. The Commanding Officer of the 4th Psychological Group, Colonel Bill Hunter, served as the exercises' JFIWCC. The JFIWCC and his staff were supported by the JPOTF. This organization developed and executed a comprehensive operational deception plan completely supported by a full scale strategic and operational PSYOP mission. The JFIWCC was also responsible for providing direct nodal analysis to all component commanders including direct tactical support to the Joint Special Operations Task Force.[39]

ADVANTAGES. As a component commander, the JFIWCC is on equal footing with existing component commanders and, as a peer, encourages unity of effort across service boundaries. By addressing IW issues at a higher level, sufficient authority is available to overcome the coordination challenges commonly faced by the traditional methods of IW organization. The JFIWCC is the JFC's point man on all IW issues, preventing stove-pipe applications of IW. Additionally, the JFIWCC is the dedicated IW commander fighting the IW war, whose pride of ownership will ensure IW success.

The JFIWCC, outfitted with a complete staff, is able to delegate meticulous coordination issues and step back and observe the IW big picture. Additionally, sufficient manpower is available to monitor the execution phase and, more importantly, perform post mission analysis. The JFIWCC staff is able to close the JFC's decision cycle and base subsequent decisions on current observations.[40]

Allocation of IW intensive platforms to the JFIWCC will facilitate timely IW reactive operations. Examples of such include the: EA-6B Prowler, RC-135 Rivet Joint, EC-130 Compass Call, RC-12 Guardrail, and all PSYOP aircraft. Also, the temporary allocation of common use assets may be necessary to support IW physical destruction, for example F/A-18 with HARM or PGMs.

DISADVANTAGES. The JFIWCC organization option is currently emerging from concept to operational application. As such, no supporting doctrine exists. The absence of written JFIWCC organizational guidance reduces its potential for future employment. Eventual acceptance rests upon innovative JFCs who conduct IW by way of a JFIWCC during joint exercises and prove the viability of this new framework. Summary reports and lessons learned generated from these exercises will be the ground work for further IW strategy development.

Success of this concept requires an IW experienced senior officer to perform the functions of the JFIWCC. Currently no strategic and operational IW training track exists to groom future JFIWCCs. As a result, the JFIWCC option could face challenges similar to traditional IW organizational methods. The creation a formalized joint IW training syllabus tailored to the education of future senior IW officers is long overdue.

With the removal of IW planning and execution from the JFC's J-3, operations officer, the potential for the stove-piping of intelligence exists. Intelligence collection during IW operations may stockpile within the JFIWCC and not be disseminated laterally among the other component commanders and the joint staff. This potential problem must be resolved early via continuous intelligence reports to the joint staff, service and functional component commanders.

CONCLUSION:

Information warfare provides the CINC and JFC with a force multiplying option that may be impossible to execute with current IW frameworks. Traditional IW organizational methods, plagued by service parochialism, will not operate as effectively in the future, given the significant technological change that has occurred and will take place. Additionally, global proliferation of sophisticated weapons and information systems has produced an adversary that will be better prepared to defend against an ad hoc application of IW. The arrival of the newest functional component commander, the JFIWCC, provides the mechanism to achieve unity of effort and ensure the robust application of IW in support of all operations.

Today's warfighter, satisfied with the status quo, must not stagnate further IW development by fighting tomorrow's conflicts on yesterday's battlefield. Information technology continues its steady advance, so must information warfare. Just as Operation Desert Storm finally validated the Joint Force Air Component Commander (JFACC) concept, it may, unfortunately, take a future conflict before complete acceptance of the JFIWCC concept. For now, JFIWCC employment during joint exercises will continue to increase the warfighter's recognition of this proven performer. The JFIWCC is the key to IW excellence.

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